**Work and Power Notes**

Definitions:

Work- is the amount of energy required to move an object times the distance the object moves. The object’s motion

must be in the same direction of the applied force on the object. **(SI Unit for Work = Joule (J))**

Power- t**he rate at which work is done.** The faster work is done, the more power is used.

Formulas and Examples:

Work:

W = \_\_\_\_\_work\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is measured in \_\_\_Joules (J)\_\_\_\_\_\_\_\_
F = \_\_\_\_\_\_Force\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is measured in \_\_\_Newtons (N)\_\_\_\_\_
d = \_\_\_\_\_\_distance\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is measured in \_\_\_\_meters (m)\_\_\_\_\_\_

Example:
275 J of work were done by pushing a table 12 m across the classroom. How much force was applied?

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| Formula: | Plug in numbers: | Answer: |

Power:

P = \_\_\_\_\_\_\_Power\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is measured in \_\_\_Watts (W)\_\_\_\_\_\_\_
W = \_\_\_\_\_\_Work\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is measured in \_\_\_\_Joules (J)\_\_\_\_\_\_\_\_\_
t = \_\_\_\_\_\_\_\_time\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is measured in \_\_\_\_\_Seconds s\_\_\_\_\_\_\_\_

Example:
275 J of work were done by pushing a table across the classroom for 5 seconds. How much power was used?

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| Formula:  | Plug in numbers: | Answer: |